



CORN VISUAL REFERENCE IMAGES

C-1.0 BLUE-EYE MOLD DAMAGE



Portion for Analysis: Approximately 250 grams

A germ affected with blue-eye mold, regardless of the size of the mold is a damaged kernel. If mold is distinct, it is not necessary to open or scrape kernel. When necessary, carefully lift the germ cover to avoid destroying evidence of mold.

NOTE: Do not confuse blue-eye mold with purple plumules. Any amount of mold that penetrates the seed coat of the kernel is considered damage (e.g., crown, tip, sides, or back).

C-1.1 PURPLE PLUMULE (NOT DAMAGE)



Portion for Analysis: Approximately 250 grams

Purple plumule IS NOT damage. The condition (light to dark purple discoloration) is due to a genetic or varietal characteristic and is restricted to the plumule area (center of germ).

NOTE: The outward appearance is similar to blue-eye mold. Consequently, it may be necessary to gently lift/remove the germ cover to make an accurate determination.

C-2.0 COB ROT DAMAGE



Portion for Analysis: Approximately 250 grams

A distinct discoloration or rotting caused by a fungus that attacks ears of weakened plants. Since the damage is distinct, it is unnecessary to open the kernel for examination.

Illustration shows from left to right:

Kernel 1: Minimum area of coverage and degree of discoloration necessary to be considered “distinctly discolored” corn.

Kernel 2: Minimum area of coverage and degree of discoloration necessary to be considered “rotted” corn.

NOTE: If kernels do not meet the interpretation, it may be necessary to open the kernels to determine if the kernels are otherwise damaged.

C-3.0 DRIER DAMAGE



Portion for Analysis: Approximately 250 grams

Illustration shows from left to right:

Kernel 1: Kernels which have a discolored, wrinkled, and blistered appearance.

Kernel 2: Kernels which are puffed and/or swollen and slightly discolored and often have damaged germs.

Kernel 3: Kernels whose seed coats are peeling off and are slightly discolored.

Kernel 4: Kernels whose seed coat is peeling off (or has already peeled off), having a crazed or checked appearance.

C-4.0 GERM DAMAGE



Portion for Analysis: Approximately 250 grams

Kernels of corn which are damaged by respiration or heat, but which are not materially discolored, shall be considered damaged. Kernels with germ areas discolored to the degree shown or worse are considered damage. If necessary, carefully remove the germ covering from the kernel. Scraping too deeply can destroy the evidence of damage and cause non-uniformity of interpretation.

Discolored germs that do not meet the minimum coverage requirement may be considered damage provided the degree of discoloration is greater than shown and the overall “prorated” appearance meets the minimum coverage and intensity level depicted. For example, to be considered damage, when the degree of discoloration is twice that shown, only half of the germ area needs to be discolored.

NOTE: Disregard the plumule when determining germ damage. Refer to ILP C-4.2

C-4.2 NOT GERM DAMAGE



Portion for Analysis: Approximately 250 grams

Kernels of corn with only the plumule discolored ARE NOT considered damage. The outward appearance is similar to blue-eye mold. Consequently, it may be necessary to gently lift/remove the germ cover to make an accurate determination.

C-5.0 HEAT DAMAGE (DRIER)



Portion for Analysis: Approximately 250 grams

Kernels of corn which are often puffed or swollen and materially discolored by external heat from artificial drying methods.

NOTE: The entire kernel must be discolored to this intensity to be heat damage. This applies to all classes of corn.

C-5.1 HEAT DAMAGE (WHITE)



Portion for Analysis: Approximately 250 grams

Kernels which are materially discolored by excessive respiration. The discoloration originates from the germ area and continues through the sides and back of the kernel (continuous band). Provided the band is continuous, there is no minimum band width requirement. Illustration shows from left to right:

Kernel 1: Shows the discoloration extending out of the germ.

Kernel 2: Shows the discoloration around the sides.

Kernel 3: Shows the discoloration across the back.

NOTE: Do not confuse with heat-damaged Yellow corn. The degree of discoloration throughout the “band” must be equal to or greater than shown. If any area within the band does not meet the minimum discoloration requirement, the kernel will NOT be considered heat damage.

C-5.2 HEAT DAMAGE (YELLOW)



Portion for Analysis: Approximately 250 grams

Kernels which are materially discolored by excessive respiration. The discoloration originates from the germ area and continues through the sides and back of the kernel (continuous band). Provided the band is continuous, there is no minimum width requirement. Illustration shows from left to right:

Kernel 1: Shows the discoloration extending out of the germ.

Kernel 2: Shows the discoloration around the sides.

Kernel 3: Shows the discoloration across the back.

NOTE: For heat damage (drier) and heat damage in white corn refer to ILP C-5.0 and C-5.1, respectively.

C-6.0 INSECT DAMAGE



Portion for Analysis: Approximately 250 grams

Whole or broken kernels with obvious weevil-bored holes or which have evidence of boring or tunneling (tracings) indicating the possible inner presence of insects, insect webbing, or insect refuse.

NOTE: Do not probe into or further expose weevil-bored holes or tunneling. Weevil bored holes that are completely visible and are free of insect webbing and/or refuse are sound.

C-7.0 MOLD DAMAGE



Portion for Analysis: Approximately 250 grams

Whole or broken kernels which contain any amount of mold on the exposed part of the kernel are considered damage.

NOTE: Do not confuse mold with dirt. Mold occurs in many colors.

C-7.1 NOT DAMAGE (DIRT)



Portion for Analysis: Approximately 250 grams

Whole or broken kernels which have dirt on the exposed part of the kernel.

NOTE: Do not confuse dirt with mold.

C-7.2 MOLD DAMAGE (PINK EPICOCCUM)



Portion for Analysis: Approximately 250 grams

A germ affected with mold, regardless of the size of the mold, is a damaged kernel.

If the mold is distinct, it is not necessary to open or scrape kernel. If opening kernel is necessary, lift germ cover carefully to avoid destroying evidence of mold.

NOTE: Do not confuse pink epicoccum with the reddish genetic characteristics found in some corn hybrids.

C-8.0 SILK CUT



Portion for Analysis: Approximately 250 grams

Kernels which contain any amount of mold in the silk cut are damaged. Kernels which contain clean silk cuts and are otherwise undamaged are sound kernels.

C-9.0 SPROUT DAMAGE



Portion for Analysis: Approximately 250 grams

Kernels which are sprouted or show evidence of sprouting are considered damage.

NOTE: Anytime the sprout extends beyond the germ area, regardless of whether it actually breaks through the seed coat or not, the affected kernel is considered damaged.

C-10.0 SURFACE MOLD (BLIGHT)



Portion for Analysis: Approximately 250 grams

Kernels which have a mold, caused by corn leaf blight, that appears to be only on the surface but actually penetrates the seed coat. Kernels which contain surface mold (blight) on one or both sides equal to or greater than that shown on both kernels are considered as surface mold (blight) damage.

NOTE: Do not confuse with surface mold (more than slight). No further examination is necessary if the kernel meets the ILP.

C-11.0 SURFACE MOLD (MORE THAN SLIGHT)



Portion for Analysis: Approximately 250 grams

Kernels of corn which contain surface mold IN ANY AREA or COMBINATION OF AREAS EQUAL to or greater than shown on the ILP.

O.F.-7.1 MIXED CORN (MORE THAN SLIGHT TINGE-STRAW)



Portion for Analysis: Approximately 250 grams

Kernels of White corn with more than a slight tinge of straw color and the area of coverage and intensity is equal to or greater than shown.

O.F.-7.2 MIXED CORN (WHITE-CAPPED YELLOW CORN)



Portion for Analysis: Approximately 250 grams

Kernels of Yellow corn with a white cap do not meet the requirements of either Yellow or White corn and function, therefore, as OCOL. Color and extent of coverage shall be equal to or greater than shown.

O.F.-7.3 FLINT AND DENT CORN



Portion for Analysis: Approximately 250 grams

Flint corn is a hard, glossy looking, and more rounded kernel and may have a slight depression (but not dent) in the crown. Dent corn is a softer textured kernel and normally has a dent in the crown.

NOTE: Do not confuse end kernels of dent corn with flint corn. End kernels of dent corn without a dent in the crown are shaped similarly to flint corn.

O.F.-7.4 SWEET CORN AND POPCORN (BCFM)



Portion for Analysis: Sample as a Whole

Typical kernels of Sweet corn and Popcorn, both of which function as foreign material.

O.F.-7.5 CORN OF OTHER COLORS



Portion for Analysis: Approximately 250 grams

Kernels which are yellow and dark red and which the dark red color covers 50 percent or more of the kernel. The color intensity must be equal to or greater than shown.

O.F.-7.7 MIXED CORN (MORE THAN SLIGHT TINGE-PINK)



Portion for Analysis: Approximately 250 grams

Kernels of White corn with a pink color on 50 percent or more of the kernel. The color intensity must be equal to or greater than shown.

O.F.-7.71 MIXED CORN (PURPLE PIGMENTED CORN)



Portion for Analysis: Approximately 250 grams

Corn of Other Colors (OCOL) In Corn

Corn will be OCOL when the area of coverage and discoloration is:

- A. Equal to or greater than shown on the back side of the kernel, or
- B. Equal to or greater than shown on the germ side of the kernel.

NOTE: Discoloration and area of coverage is not a combination of both sides of kernel.

O.F.-7.8 SLIGHTLY YELLOW IN (WHITE WAXY) CORN



Portion for Analysis: Approximately 250 grams

Kernels of corn as yellow or more in the Special Grade (White Waxy) shall be Corn of Other Colors.

O.F.-7.9 YELLOW AND WHITE CORN (WAXY)



Portion for Analysis: 100 Kernels

RED OR REDDISH BROWN-Lengthwise cut kernels exposed to iodine solution.
Stained red or reddish brown shall be assigned the special grade “Waxy”.

O.F.-7.91 YELLOW AND WHITE CORN (NON WAXY)



Portion for Analysis: 100 Kernels

BLUE OR VIOLET-Lengthwise cut kernels exposed to iodine solution. Stained blue or violet shall be “Non Waxy”.